

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of enabling user interaction with computer software running in a computer system via:

an interface surface containing information relating to the computer software and ~~including~~ having coded data indicative of a text field disposed thereon; and

a sensing device which, when placed in an operative position relative to the interface surface, senses indicating data indicative of the text field and generates movement data indicative of the sensing device's movement relative to the interface surface;

the method including the steps of, in the computer system:

- (a) receiving the indicating data from the sensing device;
- (b) receiving the movement data from the sensing device;
- (c) identifying the text field from the indicating data; and
- (d) operating the computer software at least partly in reliance on the movement data, and in accordance with instructions associated with the text field.

2. (Original) A method according to claim 1, the method further including the steps of, in the computer system, performing text recognition on the handwritten user input, thereby to generate computer text.

3. (Original) A method according to claim 1, including the step of sending, in the computer system, data to the computer software indicative of at least the text field.

4. (Previously presented) A method according to claim 1, wherein the text field is associated with a visible text zone defined on the interface surface.

5. (Previously presented) A method according to claim 2, further including the step of, in the computer system, recognising whether the movement data is indicative of an text

editing command drawn onto the surface by the user.

6. (Previously presented)A method according to claim 6, wherein, in the event that an editing command is recognised, operating the computer system in accordance with instructions associated with the editing command.

7. (Previously presented)A method according to claim 5, wherein the editing command is selected from the following group:

strikeout;
underlining;
cutting;
pasting; and
relocation.

8. (Previously presented)A method according to claim 8, wherein the editing command is applied to computer text associated with the text field.

9. (Previously presented)A method according to claim 8, wherein the editing command is applied to one or more letters, words or paragraphs.

10. (Previously presented)A method according to any one of claims 1 to 10, wherein the sensing device includes at least one acceleration measuring device for measuring acceleration of the sensing device as it is used to write the handwritten user input onto the surface, the movement data being generated by periodically sampling the acceleration of the sensing device as it is used to write the handwritten user input onto the surface.

11. (Previously presented)A method according to claim 11, further including the step of generating movement data in the form of a locus of the sensing device in relation to the surface, the locus being determined by ascertaining relative displacement of the sensing

device.

12. (Previously presented)A method according to claim 12, wherein the relative displacement is obtained by doubly integrating the acceleration with respect to time.

13. (Previously presented)A method according to claim 12 or 13, wherein the acceleration measuring device includes one or more accelerometers configured to measure at least two orthogonal components of acceleration.

14. (Previously presented)A method according to any one of claims 1 to 10, wherein position elements are disposed on the interface surface, the sensing device being configured to periodically sense position elements as it is used to write the handwritten user input onto the surface, the method including the step of generating the movement data in the form of a locus of the sensing device in relation to the surface by ascertaining relative displacement of the sensing device over time with respect to at least one of the position elements.

15. (Previously presented)A method according to claim 15, wherein the position elements are disposed on the surface as a regular array of dots, lines or other formations.

16. (Previously presented)A method according to claim 15, wherein the position elements are disposed on the surface stochastically.

17. (Previously presented)A method according to any one of claims 1 to 10, wherein the movement data is generated by ascertaining relative movement of one or more motion sensing elements rotatably mounted to the sensing device for contact with the surface while the sensing device is used to write the handwritten user input thereon.

18. (Previously presented)A method according to claim 18, wherein the motion sensing elements include one or more rollerballs mounted for rotation within a constraining housing disposed substantially within the sensing device.

19. (Previously presented)A method according to claim 19, wherein components of rotation of the rollerball, due to movement of the sensing device when writing the handwritten user input onto the surface, are periodically measured.

20. (Previously presented)A method according to claim 20, wherein the components of rotation of the rollerball due to movement of the sensing device by the user when writing the handwritten user input onto the surface are measured by means of:

rollers disposed within the constraining housing for rotation, the rollers being configured to be driven by contact with the rotating rollerball; or

optical sensing of rotation of the rollerball with respect to the constraining housing.

21. (Previously presented)A method according to any one of claims 1 to 10, wherein the coded data includes at least one tag, each tag being indicative of the signature field.

22. (Previously presented)A method according to claim 22, wherein the tags are also indicative of points within the signature field.

23. (Previously presented)A method according to claim 23, wherein each of the tags includes:

first identity data defining a relative position of that tag; and

second identity data identifying the signature field.

24. (Previously presented)A method according to claim 24, wherein the relative position is defined in relation to the signature field.

25. (Previously presented)A method according to claim 24, wherein the relative position is defined in relation to a plurality of the other tags.

26. (Previously presented)A method according to claim 24, wherein the relative position is defined in relation to the interface surface.

27. (Previously presented)A method according to claim 24, wherein the first identity data identifies stored information defining the relative position, the stored information not being stored on the interface surface.

28. (Previously presented)A method according to claim 28, wherein the first identity data and the second identity data together identify stored information defining the relative position.

29. (Currently amended)A system for enabling user interaction with computer software running in a computer system via:

an interface surface containing information relating to the computer software and ~~including~~ having coded data indicative of a text field disposed thereon; and

a sensing device which, when placed in an operative position relative to the interface surface, senses indicating data indicative of the text field and generates movement data indicative of the sensing device's movement relative to the interface surface;

the computer system being configured to:

- (a) receive the indicating data from the sensing device;
- (b) receive the movement data from the sensing device;
- (c) identify the text field from the indicating data; and
- (d) operate the computer software at least partly in reliance on the movement data, and in accordance with instructions associated with the text field.

30. (Previously presented)A system according to claim 30, wherein the computer system is configured to perform text recognition on the handwritten user input, thereby to generate computer text.

31. (Previously presented) A system according to claim 30, wherein the computer system is configured to send data to the computer software indicative of at least the text field.

32. (Previously presented) A system according to claim 31, further including the step of, in the computer system, recognising whether the movement data is indicative of an editing command drawn onto the surface by the user.

33. (Previously presented) A system according to claim 33, wherein, in the event that an editing command is recognised, operating the computer software in accordance with instructions associated with the editing command.

34. (Previously presented) A system according to claim 33, wherein the editing command is selected from the following group in relation to text:

strikeout;
underlining;
cutting;
pasting; and
relocation.

35. (Previously presented) A system according to claim 35, wherein the editing command is applied after the conversion into computer text.

36. (Previously presented) A system according to any one of claims 30 to 36, wherein the text field is associated with a visible text zone defined on the interface surface.

37. (Previously presented) A system according to any one of claims 30 to 36, wherein the sensing device includes at least one acceleration measuring device for measuring acceleration of the sensing device as it is used to write the handwritten user input onto the

surface, the movement data being generated by periodically sampling the acceleration of the sensing device as it is used to write the handwritten user input onto the surface.

38. (Previously presented) A system according to claim 38, the system being configured to generate movement data in the form of a locus of the sensing device in relation to the surface, the locus being determined by ascertaining relative displacement of the sensing device.

39. (Previously presented) A system according to claim 39, wherein the relative displacement is obtained by doubly integrating the acceleration with respect to time.

40. (Previously presented) A system according to claim 39 or 40, wherein the acceleration measuring device includes one or more accelerometers configured to measure at least two orthogonal components of acceleration.

41. (Previously presented) A system according to any one of claims 30 to 36, wherein position elements are disposed on the interface surface, the sensing device being configured to periodically sense position elements as it is used to write the handwritten user input onto the surface, the system being configured to generate the movement data in the form of a locus of the sensing device in relation to the surface by ascertaining relative displacement of the sensing device over time with respect to at least one of the position elements.

42. (Previously presented) A system according to claim 31, wherein the position elements are disposed on the surface as a regular array of dots, lines or other formations.

43. (Previously presented) A system according to claim 31, wherein the position elements are disposed on the surface stochastically.

44. (Previously presented) A system according to any one of claims 30 to 36, wherein the movement data is generated by ascertaining relative movement of one or more motion

sensing elements rotatably mounted to the sensing device for contact with the surface while the sensing device is used to write the handwritten user input thereon.

45. (Previously presented) A system according to claim 35, wherein the motion sensing elements include one or more rollerballs mounted for rotation within a constraining housing disposed substantially within the sensing device.

46. (Previously presented) A system according to claim 26, wherein components of rotation of the rollerball, due to movement of the sensing device when writing the handwritten user input onto the surface, are periodically measured.

47. (Previously presented) A system according to claim 37, wherein the components of rotation of the rollerball due to movement of the sensing device by the user when writing the handwritten user input onto the surface are measured by means of:

rollers disposed within the constraining housing for rotation, the rollers being configured to be driven by contact with the rotating rollerball; or

optical sensing of rotation of the rollerball with respect to the constraining housing.

48. (Previously presented) A system according to any one of claims 24 to 26, wherein the coded data includes at least one tag, each tag being indicative of the signature field.

49. (Previously presented) A system according to claim 49, wherein the tags are also indicative of points within the signature field.

50. (Previously presented) A system according to claim 50, wherein each of the tags includes:

first identity data defining a relative position of that tag; and

second identity data identifying the signature field.

51. (Previously presented) A system according to claim 51, wherein the relative position is defined in relation to the signature field.

52. (Previously presented) A system according to claim 51, wherein the relative position is defined in relation to a plurality of the other tags.

53. (Previously presented) A system according to claim 51, wherein the relative position is defined in relation to the interface surface.

54. (Previously presented) A system according to claim 51, wherein the first identity data identifies stored information defining the relative position, the stored information not being stored on the interface surface.

55. (Previously presented) A system according to claim 55, wherein the first identity data and the second identity data together identify stored information defining the relative position.

56. (Currently amended) A system for enabling user interaction with computer software running in a computer system, the system including:

an interface surface containing information relating to the computer software and ~~including having~~ coded data disposed thereon, the coded data being indicative of a text field relating to the computer software;

the system being configured to, in the computer system:

- (a) receive indicating data from a sensing device, the indicating data being indicative of the text field, wherein the sensing device, when placed in an operative position relative to the interface surface, senses the indicating data and generates movement data indicative of the sensing device's movement relative to the interface surface;
- (b) receive the movement data from the sensing device;
- (c) identify the text field on the basis of the indicating data; and

(d) operate the computer software at least partly in reliance on the movement data, and in accordance with instructions associated with the text field.

57. (Previously presented)A system according to claim 57, the computer system being configured to perform text recognition on the handwritten user input, thereby to generate computer text.

58. (Previously presented)A system according to claim 57, the computer system being configured to send data to the computer software indicative of at least the text field.

59. (Previously presented)A system according to claim 57, the computer system being configured to recognise whether the movement data is indicative of an text editing command drawn onto the surface by the user.

60. (Previously presented)A system according to claim 60, wherein, in the event that an editing command is recognised, operating the computer system in accordance with instructions associated with the editing command.

61. (Previously presented)A method according to claim 60, wherein the editing command is selected from the following group:

strikeout;
underlining;
cutting;
pasting; and
relocation.

62. (Previously presented)A method according to claim 62, wherein the editing command is applied to computer text associated with the text field.

63. (Previously presented)A method according to claim 63, wherein the editing command is applied to one or more letters, words or paragraphs.

64. (Previously presented)A system according to any one of claims 30 to 36, wherein the computer system is configured to send data to the computer software indicative of at least the text field.

65. (Previously presented)A system according to any one of claims 30 to 36, wherein the text field is associated with a visible text zone defined on the interface surface.

66. (Previously presented)A system according to any one of claims 30 to 36, wherein the sensing device includes at least one acceleration measuring device for measuring acceleration of the sensing device as it is used to write the handwritten user input onto the surface, the movement data being generated by periodically sampling the acceleration of the sensing device as it is used to write the handwritten user input onto the surface.

67. (Previously presented)A system according to claim 77, the system being configured to generate movement data in the form of a locus of the sensing device in relation to the surface, the locus being determined by ascertaining relative displacement of the sensing device.

68. (Previously presented)A system according to claim 68, wherein the relative displacement is obtained by doubly integrating the acceleration with respect to time.

69. (Previously presented)A system according to claim 68 or 69, wherein the acceleration measuring device includes one or more accelerometers configured to measure at least two orthogonal components of acceleration.

70. (Previously presented)A system according to any one of claims 30 to 36, wherein position elements are disposed on the interface surface, the sensing device being configured

to periodically sense position elements as it is used to write the handwritten user input onto the surface, the system being configured to generate the movement data in the form of a locus of the sensing device in relation to the surface by ascertaining relative displacement of the sensing device over time with respect to at least one of the position elements.

71. (Previously presented) A system according to claim 71, wherein the position elements are disposed on the surface as a regular array of dots, lines or other formations.

72. (Previously presented) A system according to any one of claims 30 to 36, wherein the movement data is generated by ascertaining relative movement of one or more motion sensing elements rotatably mounted to the sensing device for contact with the surface while the sensing device is used to write the handwritten user input thereon.

73. (Previously presented) A system according to any one of claims 30 to 36, wherein the coded data includes at least one tag, each tag being indicative of the signature field.

74. (Previously presented) A system according to claim 74, wherein the tags are also indicative of points within the signature field.

75. (Previously presented) A system according to claim 75, wherein each of the tags includes:

first identity data defining a relative position of that tag; and

second identity data identifying signature field.

76. (Previously presented) A system according to claim 76, wherein the relative position is defined in relation to the signature field.

77. (Previously presented) A system according to claim 76, wherein the relative position is defined in relation to a plurality of the other tags.

78. (Previously presented) A system according to claim 76, wherein the relative position is defined in relation to the interface surface.

79. (Currently amended) A method to enable a user to interact with computer software running in a computer system utilizing a form printed onto a surface, the form including information relating to the computer software, the surface having coded data disposed thereon, the coded data being indicative of a text field relating to the computer software, the method including the steps of:

providing the form to the user;

receiving, in the computer system, indicating data and movement data from a sensing device, the indicating data indicative of the text field, the movement data indicative of movement of the sensing device relative to the form, the sensing device, when placed operatively relative to the text field, generating the indicating data based at least partially on sensing at least some of the coded data and substantially simultaneously generating the movement data; and

identifying, in the computer system and from the indicating data, the text field, and

operating the computer software at least partially in reliance on the movement data and on instructions associated with the text field.

80. (Previously amended) The method of claim 79, which includes printing the form in response to receiving, in the computer system, a request for the form.

81. (Previously presented) The method of claim 79, which includes causing the form and the coded data to be printed onto the surface substantially simultaneously.

82. (Previously presented) The method of claim 79, including the step of performing text recognition on the movement data to generate computer text.

83. (Previously presented) The method of claim 79 further including the step of, in the

computer system, recognizing whether the movement data is indicative of a text editing command drawn on the surface by the user.

84. (Previously presented)The method of claim 83 wherein, in the event that the editing command is recognized, operating the computer system in accordance with instructions associated with the editing command.

85. (Previously presented)The method of claim 83 wherein the editing command is selected from one of the following group: strickout, underlining, cutting, pasting; and relocation.

86. (Previously presented)The method of claim 84 wherein the editing command is applied to computer text associated with the text field.

87. (Previously presented)The method of claim 84 wherein the editing command is applied to one or more letters, words or paragraphs.

88. (Previously presented)The method of claim 79, inlcuding the step of identifying the user.

89. (Previously presented)The method of claim 88, wherein the step of identifying the user includes using the movement data.

90. (Previously presented)The method of claim 88, further including the step of receiving, in the computer system, data indicative of an identity of the user.

91. (Previously presented)The method of claim 79, further including the step of receiving, in the computer system, data from storage of the sensing device, the data being indicative of an identity of the user.

92. (Previously presented)The method of claim 79, including the step of sending, in the computer system, data to the computer software indicative of at least the text field.

93. (Previously presented)The method of claim 79, wherein the text field is associated with a visible text zone defined on the surface.

94. (Previously presented)The method of claim 79, wherein the sensing device includes at least one acceleration measuring device for measuring acceleration of the sensing device as it is used on the surface, the movement data being generated by periodically sampling the acceleration of the sensing device as it is used on the surface.

95. (Previously presented)The method of claim 79, further including the step of generating movement data in the form of a locus of the sensing device in relation to the surface, the locus being determined by ascertaining relative displacement of the sensing device.

96. (Previously presented)The method of claim 95, wherein the relative displacement is obtained by doubly integrating the acceleration with respect to time.

97. (Previously presented)The method of claim 94, wherein the acceleration measuring device includes one or more accelerometers configured to measure at least two orthogonal components of acceleration.

98. (Previously presented)The method of claim 79, wherein elements are disposed on the surface, the sensing device being configured to periodically sense the elements as it is used on the surface, the method including the step of generating the movement data by ascertaining relative displacement of the sensing means over time with respect to at least one of the elements.

99. (Previously presented)The method of claim 98, wherein the element are disposed on the surface as a regular array of dots, lines or other formations.

100. (Previously presented)The method of claim 98, wherein the elements are disposed on the surface stochastically.

101. (Previously presented)The method according to claim 98, wherein the coded data includes the elements.

102. (Previously presented)The method of claim 79, wherein the movement data is generated by ascertaining relative motion of one or more motion sensing elements rotatably mounted to the sensing device for contact with the surface while the sensing device is used thereon.

103. (Previously presented)The method of claim 102 wherein the motion sensing elements include one or more rollerballs mounted for rotation within a constraining housing disposed substantially within the sensing device.

104. (Previously presented)The method of claim 103, wherein components of rotation of the rollerball, due to movement of the sensing device on the surface, are periodically measured.

105. (Previously presented)The method of claim 104, wherein the components of rotation of the rollerball due to movement of the sensing device on the surface are measured by means of:

rollers disposed within the constraining housing for rotation, the rollers being configured to be driven by contact with the rotating rollerball; or

optical sensing of rotation of the rollerball with respect to the constraining housing.

106. (Previously presented)The method of claim 79, wherein the coded data is indicative of a plurality of positions, in or associated with the text field.

107. (Previously presented)The method of claim 79, wherein the coded data includes a plurality of tags, each of which includes tag data.

108. (Previously presented)The method of claim 107, including deriving the relative position of at least one tag using at least some of the at least one tag's tag data.

109. (Previously presented)The method of claim 108, wherein the relative position is defined in relation to one of the group comprising: a plurality of other tags, the surface, the text field, and a zone associated with the text field.

110. (Previously presented)The method of claim 107, including deriving an identity of the text field using at least some of the tag data of at least one tag.

111. (Previously presented)The method of claim 110, wherein the data from which the identity of the text field is derived is the same in all tags of the same text field.

112. (Currently amended)A system for enabling a user to interact with computer software running in a computer system utilizing a form printed onto a surface, the form including information relating to the computer software, the surface having coded data disposed thereon, the coded data being indicative of a text field relating to the computer software, the system including:

a computer system which:

receives indicating data and movement data from a sensing device, the indicating data indicative of a text field relating to the computer software and the movement data indicative of movement of the sensing device relative to the form, the sensing device, when placed operatively relative to the text field, generating the indicating data based at least partially on sensing at least some of the coded data and substantially simultaneously

generating the movement data;

identifies, from the indicating data, the text field, and

operates the computer software at least partially based on reliance on the movement data and instructions associated with the text field.

113. (Previously presented)The system of claim 112 including a printer for printing the form in response to receiving, in the computer system, a request for the form.

114. (Previously presented)The system of claim 112 including a printer for printing the form, and in which the printer prints the coded data at substantially the same time as the form.

115. (Previously presented)The system of claim 112 including the step of performing text recognition on the movement data to generate computer text.

116. (Previously presented)The system of claim 112 further including the step of, in the computer system, recognizing whether the movement data is indicative of a text editing command drawn on the surface by the user.

117. (Previously presented)The system of claim 116 wherein, in the event that the editing command is recognized, operating the computer system in accordance with instructions associated with the editing command.

118. (Previously presented)The system of claim 116 wherein the editing command is selected from one of the following group: strikeouts, underlining, cutting, pasting; and relocation.

119. (Previously presented)The system of claim 116 wherein the editing command is applied to computer text associated with the text field.

120. (Previously presented)The system of claim 116 wherein the editing command is applied to one or more letters, words or paragraphs.

121. (Previously presented)The system of claim 112, wherein the computer system is configured to identify the user.

122. (Previously presented)The system of claim 121, wherein the computer system is configured to identify the user by using the movement data.

123. (Previously presented)The system of claim 121, wherein the computer system is configured to receive data indicative of an identity of the user.

124. (Previously presented)The system of claim 112, wherein the computer system is configured to receive identity data from storage of the sensing device, the identity data being indicative of an identity of the user.

125. (Previously presented)The system of claim 112, wherein the computer system is configured to send data to the computer software indicative of at least the text field.

126. (Previously presented)The system of claim 112, wherein the text field is associated with a visible text zone defined on the surface.

127. (Previously presented)The system of claim 112 which includes the sensing device.

128. (Previously presented)The system of claim 127 wherein the sensing device includes at least one acceleration measuring device for measuring acceleration of the sensing device as it is used on the surface, the movement data being generated by periodically sampling the acceleration of the sensing device as it is used on the surface.

129. (Previously presented)The system of claim 127, wherein the sensing device generates movement data in the form of a locus of the sensing means in relation to the surface, the locus being determined by ascertaining relative displacement of the sensing device.

130. (Previously presented)The system of claim 129, wherein the relative displacement is obtained by doubly integrating acceleration with respect to time.

131. (Previously presented)The system of claim 128, wherein the acceleration measuring device includes one or more accelerometers configured to measure at least two orthogonal components of acceleration.

132. (Previously presented)The system of claim 127, wherein elements are disposed on the surface, the sensing device being configured to periodically sense the elements as it is used on the surface, the movement data being generated by ascertaining relative displacement of the sensing means over time with respect to at least one of the elements.

133. (Previously presented)The system of claim 132, wherein the elements are disposed on the surface as a regular array of dots, lines or other formations.

134. (Previously presented)The system of claim 132, wherein the elements are disposed on the surface stochastically.

135. (Previously presented)The system of claim 132 wherein the coded data includes the elements.

136. (Preivously presented)The system of claim 127, wherein the movement data is generated by ascertaining relative movement of one or more motion sensing elements rotatably mounted to the sensing device for contact with the surface while the sensing device

is used thereon.

137. (Previously presented)The system of claim 136, wherein the motion sensing elements include one or more rollerballs mounted for rotation within a constraining housing disposed substantially within the sensing device.

138. (Previously presented)The system of claim 137, wherein components of rotation of the rollerball, due to movement of the sensing device when used on the surface, are periodically measured.

139. (Previously presented)The system of claim 138, wherein the components of rotation of the rollerball due to movement of the sensing device by the user when used on the surface are measured by means of:

rollers disposed within the constraining housing for rotation, the rollers being configured to be driven by contact with the rotating rollerball; or

optical sensing of rotation of the rollerball with respect to the constraining housing.

140. (Previously presented)The system of claim 132, wherein the coded data is indicative of a plurality of positions in or associated with the text field.

141. (Previously presented)The system of claim 132, wherein the coded data includes a plurality of tags, each of which includes tag data.

142. (Previously presented)The system of claim 141, wherein the computer system is configured to derive the relative position of at least one tag using at least some of the tag data of the at least one tag.

143. (Previously presented)The system of claim 142, wherein the relative position is defined in relation to one of the following group: a plurality of other tags, the surface, the

text field, and a zone associated with the text field.

144. (Previously presented)The system of claim 140, where the computer system is configured to derive an identity of the text field using at least some of the tag data of at least one tag.

145. (Previously presented)The system of claim 144, wherein the data from which the identity of the text field is derived is the same in all the tags of the same text field.

146. (Previously presented)The system of claim 128 when dependent on claim 127 wherein the sensing device includes a marking nib.

147. (Previously presented)The system of claim 128 when dependent on claim 127 wherein the sensing device contains identity information which imparts a unique identity to the sensing device.

148. (Previously presented)The system of claim 147 when dependent on claim 124, wherein the identity data includes the identity of the sensing device.